Patent Claims

1. A method for carrying out the advancing movement of at least one tool rest rotating about a rotationally symmetric component and which is capable of being fed in each case via a leadscrew, is supported on the component and is driven in rotation as a whole by a stationarily mounted main motor via a main transmission mechanism connected firmly to the support of the tool rest or tool rests, characterized in that the advancing movement of each leadscrew is brought about by the relative movement of a further motor-driven transmission mechanism cooperating with the leadscrew, in addition to the main transmission mechanism.

2. The method as claimed in claim 1, characterized in that the relative movement is generated by the drive in each case of a rest motor mounted at a fixed location, which drives the further transmission mechanism and which is synchronously driven in rotation as a whole by the main motor with the aid of a mechanical coupling to the latter.

3. The method as claimed in claim 1 or 2, characterized in that each rest motor is braked in the event of a feed of zero.

4. A feed device for a working machine for the surface machining of rotationally symmetric components (1), with a stationarily mounted main motor (8) and with a main transmission mechanism for transmitting the drive movement from the main motor (8) to at least one rest mounting (3), rotating about the component (1)

and supported on the component (1), for at least one tool rest (4) capable of being fed via a leadscrew (5), characterized in that each leadscrew (5) is capable of being driven by a further transmission mechanism (12) and the latter by a fixed rest motor (13), the housing of which is mounted rotatably and coupled mechanically to the main motor (8) and is thus capable of being driven synchronously in rotation by the latter.

5. The feed device as claimed in claim 4, characterized in that the main transmission mechanism is an externally toothed gear ring (6) driven by a pinion (7) seated on the motor shaft of the main motor (8).

6. The feed device as claimed in claim 4 or 5, characterized in that the main transmission mechanism is an externally toothed gear ring driven by the motor shaft of the main motor via a toothed belt.

7. The feed device as claimed in one of claims 4 to 6, characterized in that the further transmission mechanism is an externally and internally toothed gear ring (12) driven by a pinion (17) seated on the motor shaft of the rest motor (13).

8. The feed device as claimed in one of claims 4 to 7, characterized in that the further transmission mechanism is an externally and internally toothed gear ring driven by the motor shaft of the rest motor via a toothed belt.

9. The feed device as claimed in one of claims 4 to 8, characterized in that each rest motor (13) is equipped with a slip ring set (15) for the transmission of power to its windings.

10. The feed device as claimed in one of claims 4 to 9, characterized in that the further transmission mechanism is mounted rotatably on a support (10) of the main motor (8).

11. The feed device as claimed in one of claims 4 to 9, characterized in that the further transmission mechanism is mounted rotatably on the rest mounting (3) of the tool rest (4).

12. The feed device as claimed in one of claims 4 to 11, characterized in that the main motor (8) is coupled mechanically to the housing of the rest motor or rest motors (13) via toothed belts (14).

13. The feed device as claimed in one of claims 4 to 11, characterized in that the main motor is coupled mechanically to the housing of the rest motor or rest motors via gearwheel mechanisms.

14. The feed device as claimed in one of claims 4 to 13, characterized in that the rest motor (13) is a brake motor.